Massachusetts Bay Transportation Authority

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No. 5 Blue Line Cars

The Blue Line is targeted for major capacity expansion and improved operating efficiency through the introduction of longer trains. A 50% increase in train length is planned, equivalent to adding two more cars to the present four-car trains.

The MBTA has initiated a program to purchase an entirely new fleet of 94 cars for the Blue Line, optimally configured for that service. The new cars, designated as the No. 5 cars, are designed to comply with the latest ADA requirements and include automatic station announcements, both audible and visual, to provide essential information to passengers.

The No. 5 car is the latest iteration of technically advanced heavy rail cars used by the MBTA. Through the use of IGBT and microprocessor based technology, the No. 5 car incorporates modern performance and diagnostic systems to enhance Blue Line operations.

Order Information	
Carbuilder	Siemens Transportation Systems
Total Order	94 Cars
Configuration	Married Pairs
Notice to Proceed	November 1, 2001
Delivery Date	Pilot Cars - January 2005
Inaugural Service	February 2008

Capacity	
Seating	35 Passengers
Crush Load	145 Passengers Plus 1 Operator
W/C Parking	2 ADA Compliant Areas per Car

Vehicle Dimensions	
Height	12 ft. 9-1/2 in. (Panto Latched Down)
Width	9 ft. 3 in. (Over Thresholds)
Length	48 ft. 10 in. (Over Drawbar Faces)
Weight (lbs.)	69,000 (Empty) 91,630 (Crush)
Door Width	4 ft. 6 in. (Passenger Side Doors) 2 ft. 6 in. (End Doors)
Door Height	6 ft. 3 in.

Vehicle Designed and Built By:

SIEMENS

Engineering Services Provided By:

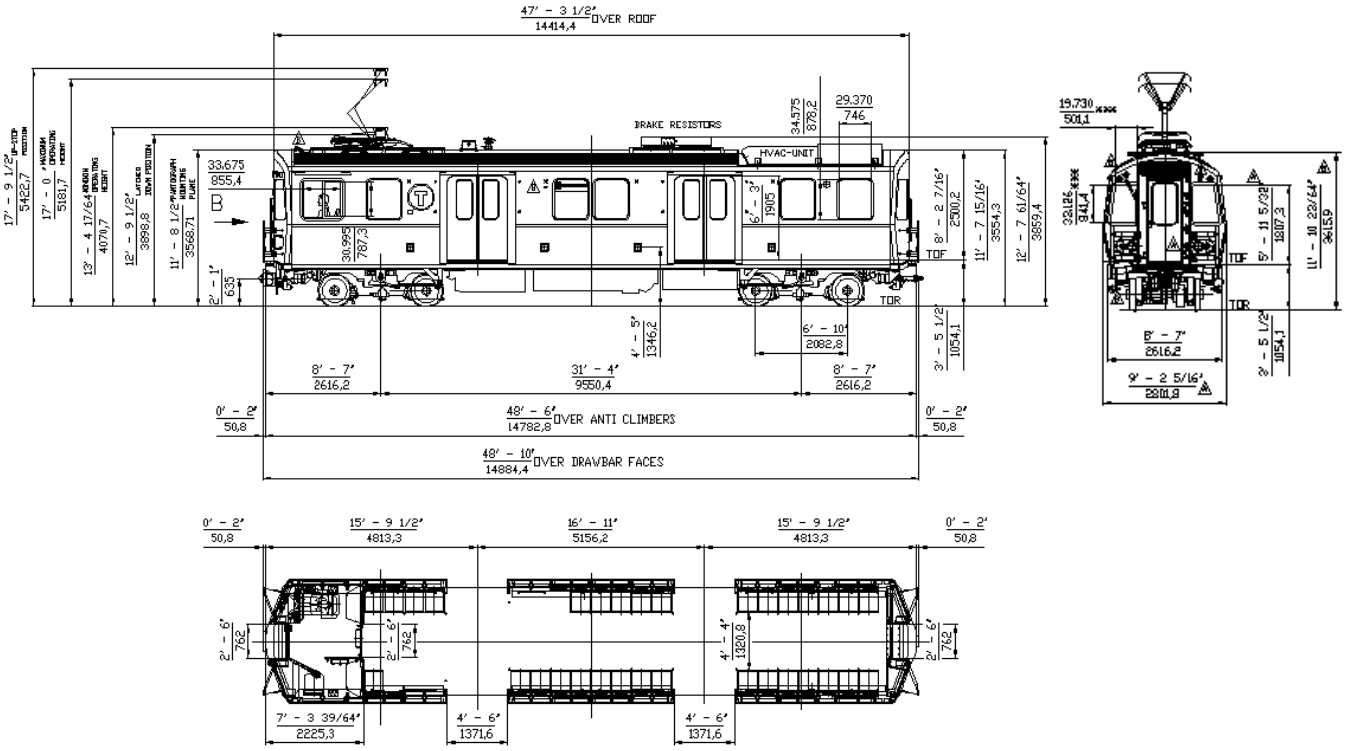
LTK Engineering Services

Performance	
Maximum Speed	65 mph
Operating Speed	40 mph (Governed on Blue Line)
Acceleration	2.75 mphps
Service Braking	3.0 mphps (Dynamic)
Service Braking	2.75 mphps (Friction Only)
Emergency Braking	3.25 mphps (Friction Only)
Turning Radius	66 ft. (Minimum)

Equipment Suppliers	
Carshell	Siemens
Trucks	Kawasaki
Propulsion	Siemens
APS	Transtechnik
HVAC	TTA/Transitair
Doors	Curtis
Communications	Envitech
Coupler	Dellner
Brakes	Wabco
TMS	Siemens
Slip / Slide Control	Siemens
Destination Signs	Translite
Pantograph	Schunk

Carbody	
Underframe	Stainless Steel With Low Alloy High Tensile End Underframe
Structure	Stainless Steel (Sides and Roof)
Floor	Plymetal With Marine Grade Rubber Covering
Doors	Bi-parting Single Leaf Doors
Windows	Fixed, Single-Glazed Safety Glass
Seats	Stainless Steel With Molded Fiberglass Inserts

MBTA NO. 5 BLUE LINE CAR



Truck	
Type	Fabricated
Primary Suspension	Chevrons
Secondary Suspension	Air Springs
Truck Spacing	31ft. 4 in.
Wheel Base	6 ft. 10 in.
Wheels	2 ft. 4 in. (Diameter New)
Gauge	4 ft. 8-3/4 in.

AC Propulsion and Braking	
Motors	4 AC Traction Motors per Car
Control	Microprocessor Based IGBT
Service Brakes	Blended Dynamic Rheostatic and Regenerative Supplemented by Pneumatic Friction Brake
Emergency Brakes	Pneumatic Friction Brake
Parking Brake	Mechanical Handbrakes

Electrical	
Power Supply	600 VDC Catenary or 600 VDC Third Rail
Auxiliary Power	230 Volts, 60 Hertz, 3 Phase AC 115 Volts, 60 Hertz, Single Phase AC
Low Voltage	37.5 Volts DC

Comfort	
Passenger Area Heating	Electric Radiant Floor Heating System With Forced Overhead Air Heating
Cab Area Heating	Two Electric Forced Air Heaters
Air Conditioning	Unitized, Roof Mounted (10 Ton)

Environmental	
Noise Levels	78 dBA (Car Operating, Cab Interior) 74 dBA (Car Operating, Passenger Interior) 86 dBA (Exterior of Car, 50mph at 50 ft. From Track Centerline)

Miscellaneous Features	
Couplers	Automatic
Spin/Slide System	Fully Integrated Into Propulsion and Braking Controls
Train Health Monitoring System	Fully Automatic System, Color Monitor in Cab
Information System	Automatic Announcement and Visual Displays
Passenger Emergency Intercom	2 Stations per Car
Destination Signs	Electronic, LCD